



US 20030032479A1

(19) **United States**(12) **Patent Application Publication** (10) **Pub. No.: US 2003/0032479 A1**  
LeMay et al. (43) **Pub. Date: Feb. 13, 2003**(54) **VIRTUAL CAMERAS AND 3-D GAMING  
ENVIROMENTS IN A GAMING MACHINE****Publication Classification**(51) **Int. Cl.<sup>7</sup>** ..... **A63F 9/24**(52) **U.S. Cl.** ..... **463/32**(75) Inventors: **Steven G. LeMay**, Reno, NV (US);  
**Jamal Benbrahim**, Reno, NV (US);  
**Richard E. Rowe**, Reno, NV (US);  
**Robert E. Breckner**, Sparks, NV (US);  
**Nicole M. Beaulieu**, Reno, NV (US);  
**Greg A. Schlottmann**, Reno, NV (US)(57) **ABSTRACT**

A disclosed gaming machine provides method and apparatus for presenting a plurality of game outcome presentations derived from one or more virtual 3-D gaming environments stored on the gaming machine. While a game of chance is being played on the gaming machine, two-dimensional images derived from a three-dimensional object in the 3-D gaming environment may be rendered to a display screen on the gaming machine in real-time as part of the game outcome presentation. To add excitement to the game, a 3-D position of the 3-D object and other features of the 3-D gaming environment may be controlled by a game player. Nearly an unlimited variety of virtual objects, such as slot reels, gaming machines and casinos, may be modeled in the 3-D gaming environment.

Correspondence Address:  
**BEYER WEAVER & THOMAS LLP**  
**P.O. BOX 778**  
**BERKELEY, CA 94704-0778 (US)**

(73) Assignee: **IGT**(21) Appl. No.: **09/927,901**(22) Filed: **Aug. 9, 2001**